



Oral Presentation

Medical and operative management of odontoid process (dens) fracture in a cat : a case report

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Abstract

Unlike other cervical vertebrae, the second cervical vertebra(C2) has an important structure called the odontoid process in its body. Due to its strong ligamentous support, it only breaks due to high-energy trauma, osteoporosis or developmental anomalies. Neurological disorders are seen in patients, ranging from non-irritating cervical pain to tetraplegia. The diagnosis of the fracture is made by direct radiography, computed tomography(CT) and magnetic resonance imaging(MRI). Conservative or surgical treatment is applied depending on the type of fracture. The presented case consisted of a 9-month-old, male, 5.5 kg, domestic shorthaired cat brought to Istanbul University-Cerrahpaşa Faculty of Veterinary Medicine, Department of Surgery. The cat had fallen from the 11th floor 6 days ago and had complaints of not being able to use its legs and keeping its head tense. In the neurological examination, it was determined that there was no reception response in all four legs, increased spinal reflexes, almost no voluntary movements, and in addition, the front legs were in extension. Cranial nerve examination was normal. As a result of CT and MRI examination of the cervical region, it was observed that the odontoid process was displaced posteriorly, the fracture line narrowed the spinal canal, and edema developed in the paraspinal muscles. An operation decision was made for decompression and stabilization. To cure edema, 20% mannitol and methylprednisolone were administered intravenously. By entering the atlantoaxial region with a ventral approach, the odontoid fracture fragment was reached with a slight caudal retraction of C2. However, with the development of cardiopulmonary arrest, the operation was terminated and resuscitation was started. After successful CPR application, the patient was awakened and the operation was postponed for one week. A week later, the broken odontoid part was removed with the operation. Since the ligament structures of the joint were intact and stable, stabilization was not considered necessary. The patient started walking without support approximately 1.5 months after the operation. This case report is the first report in the literature which complete recovery was achieved by removing only the fractured fragment without stabilization after an odontoid process fracture.

Keywords: cat, odontoid process fracture, high rise syndrome

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